

AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) ~~A nano-imprint system~~ An apparatus for monitoring mold deformation in nano-imprint, comprising:

a mold ~~comprising~~ a body having a first surface and an opposite second surface, imprinting patterns being formed in areas of the second surface;

an electrostatic plate capacitor comprising first and second metal film electrodes respectively embedded in the first and second surfaces of the mold body and spaced a distance from each other and a metal lead embedded in the mold body and connecting the first and second metal film electrodes;

a detection device detecting a capacitance of the electrostatic plate capacitor and comprising means for converting the capacitance into an amount of deformation of the mold body; and

an external monitoring device receiving a signal representing the amount of deformation from the detection device and selectively recording and displaying the amount of deformation and comprising means for comparing the amount of deformation with a reference to determine if the amount of deformation exceeds the reference and selectively issuing a warning and shutting down the system.

2. (Currently Amended) The apparatus ~~system~~ as claimed in Claim 1, wherein the imprinting patterns of the mold body selectively comprise micro-scale patterns and nano-scale patterns.
3. (Currently Amended) The apparatus ~~system~~ as claimed in Claim 1, wherein the metal

film electrodes are formed on the mold body without overlapping the imprinting patterns.

4. (Currently Amended) The apparatus ~~system~~ as claimed in Claim 1, wherein the electrostatic plate capacitor and the detection device ~~[[is]]~~ are coupled to the external monitoring device by a cable.
5. (Currently Amended) The apparatus ~~system~~ as claimed in Claim 1, wherein the electrostatic plate capacitor and the detection device ~~[[is]]~~ are coupled to the external monitoring device in a wireless manner.
6. (Currently Amended) The apparatus ~~system~~ as claimed in Claim 5, wherein the wireless coupling comprises a wireless transmitter that receives and encodes the detection result from the detection device and transmits a wireless signal and a wireless receiver that receives the wireless signal and a decoder that decodes the received wireless signal and applies a corresponding signal to the external monitoring device.
7. (Currently Amended) The apparatus ~~system~~ as claimed in Claim 1, wherein the detection device comprises a detection circuit for detecting the capacitance of the electrostatic plate capacitor and issues a detection signal, a modulation circuit for modulating the detection signal and issuing a modulated signal, an analog-to-digital converter that receives and converts the modulated signal into a digital signal, and a signal processing circuit that processes ~~process~~ and converts the digital signal into the amount of deformation of the mold body.

8. (Currently Amended) The apparatus system as claimed in Claim 7, wherein the detection circuit, the modulation circuit, the analog-to-digital converter and the signal processing circuit are coupled by physical electrical connections.
9. (Currently Amended) The apparatus system as claimed in Claim 7, wherein the detection circuit, the modulation circuit, the analog-to-digital converter and the signal processing circuit are coupled by wireless connections.
10. (Currently Amended) The apparatus system as claimed in Claim 9, wherein the wireless coupling comprises a wireless transmitter that receives and encodes a first signal and transmits a wireless signal and a wireless receiver that receives the wireless signal and a decoder that decodes the received wireless signal and issues a corresponding second signal.
11. (Currently Amended) A method for monitoring amount of deformation of a nano-imprint mold comprising the following steps:
 - (A) (1) detecting and recording a reference capacitance of an electrostatic plate capacitor embedded in the nano-imprint mold at a first time point before the start of an imprinting process carried out with the nano-imprint mold;
 - (B) (2) detecting a capacitance of the electrostatic plate capacitor at a second time point after the imprinting process is being carried out;
 - (C) (3) processing the capacitance detected at the second time point to obtain an amount of deformation of the nano-imprint mold;
 - (D) (4) feeding the amount of deformation to an external monitoring device and

recording the amount of the deformation;

(E) (5) using the external monitoring device to display and selectively determine if the amount of deformation exceeds a limit that is determined on the basis of the reference capacitance; and

(F) (6) if the amount of deformation exceeds the limit, then selectively issuing warning and selectively stopping the imprinting process otherwise repeating steps (2)-(5).

12. (Original) The method as claimed in Claim 11, wherein in step (2), the capacitance of the electrostatic plate capacitor is detected by a detection circuit.

13. (Currently Amended) The method as claimed in Claim 11, wherein in step (3), the capacitance is detected by a circuit and represented as an electrical signal and wherein step (3) further comprises the following sub-steps:

(A) modulating the signal representing the capacitance to issue a modulated signal;

(B) converting the modulated signal into a digital signal; and

(C) comparing the digital signal with the reference capacitance and calculating the amount of [[the]] deformation.

14. (Original) The method as claimed in Claim 11, wherein in step (5), the amount of deformation is directly displayed on a display device of the external monitoring device.